

# WMATA: Updating Rail Service Standards

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Subcommittee**  
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# Background

- Most recent Board review and adoption of Metrorail service standards in 2012 and 2013; Metrobus service guidelines updated in December 2020
  
- Opportunity to update standards to reflect current conditions and operating practices
  - Changes in service patterns and ridership
  - The “one size fits all” service levels doesn’t provide flexibility to adjust service
  - More service adjustments for system renewal
  - Increased use of eight-car trains

# Current Rail Service Standards, adopted 2012-2013

- Define rush hour passenger per car crowding standards
- Set weekday rush and non-rush train frequencies
- Specify operating hours

## Limitations of Current Standards

- Fixed rush period standard
- Less emphasis on off-peak and no standards for weekend service

## 2012-2013 Service Standards

**Rush Period Passenger Load:** Below an average of **100 passengers per car (PPC)** and between 80 and 120

**Rush Period:** **2.5 to 3 minutes** on core interlined segments and up to **6 minutes** on all other segments except Arlington Cemetery, which will be **12 minutes**

**Weekday Midday:** Up to **6 minutes** on core interlined segments and up to **12 minutes** on all other segments.

**Weekday Evenings:** Up to **15 minutes** on core interlined segments and up to **20 minutes** on all other segments.

**Weekend:** Unspecified.

# Service Standard Categories

Guide deployment of service, inform capital investment and operating resource needs, and offer information to the public about how Metro plans and schedules rail service

- **Minimum Train Frequencies**

- Establish how frequently trains arrive at each station during base service periods
- Defines minimum level of service quality for riders; impacts average wait times



- **Passenger Load Standards**

- Define target passenger loads and crowding levels for service planning and capacity investments
- Used to plan line-specific service levels during busy periods and informs total system capacity needs





# Minimum Train Frequencies

## Regular Service

- Daytime and Early Evening:  
Opening to 9:30 pm, 7 days a week
  - **12 Minutes**  
— Blue, Orange, Silver, Green, Yellow Lines
  - **6 minutes**  
— Red Line
- Late Night:  
9:30 pm until close, 7 days a week
  - **15 Minutes**  
— Blue, Orange, Silver, Green, Yellow Lines
  - **10 minutes**  
— Red Line



# Passengers Loads

- Weekday rush period average passenger loads at or below 100 passengers per car (PPC)
  - Optimal: 80 to 100 passengers per car
  - Crowded: 101 to 120 passengers per car
  - Very Crowded: 121 or more passengers per car
- Non-rush period average passenger loads at or below seated load

*Measured as average passenger loads at maximum load points in the peak hour and peak direction*



# Eight-Car Trains

- Goal: Operation of 100% eight-car trains in passenger service

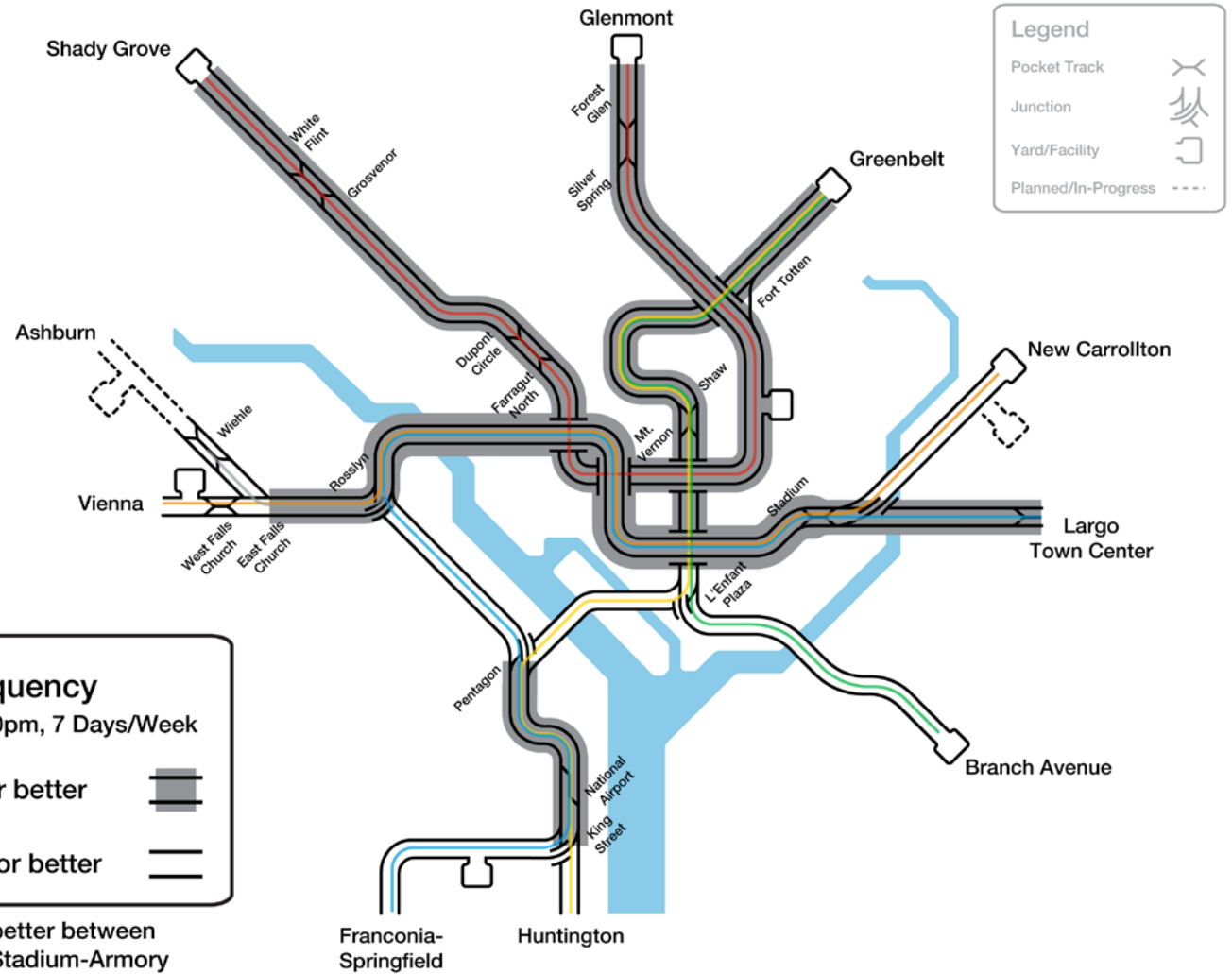
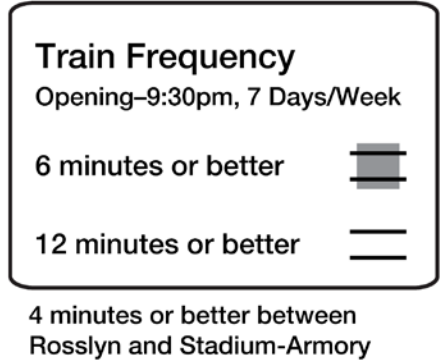




# Effective Train Frequency by Segment

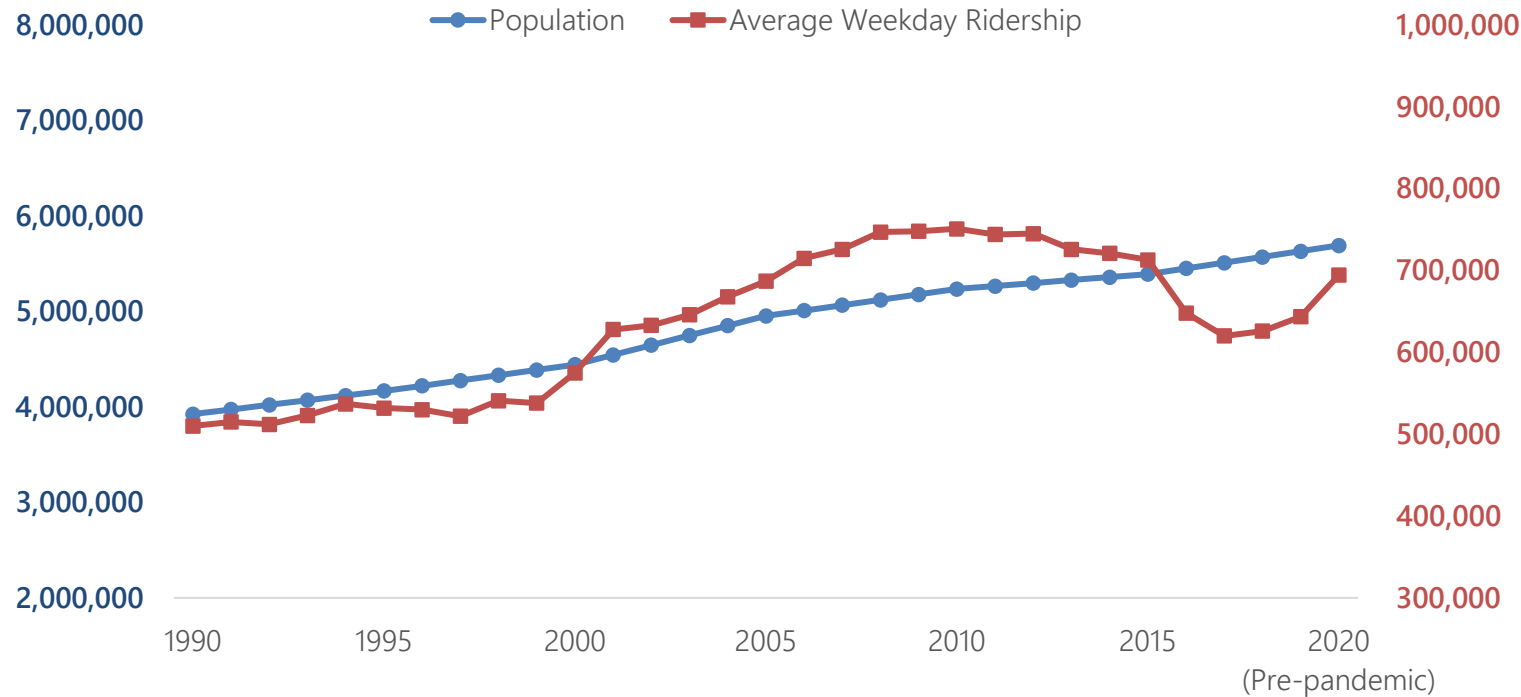
- Most riders receive better service than minimum line frequencies
  - Peak service runs more frequently
  - Interlined segments, where two or more lines overlap, and the Red Line have higher effective frequencies

Train frequency of **6 minutes or better** at **65 stations** (71% of all stations)





## Pre-pandemic, rail ridership was growing in 2020

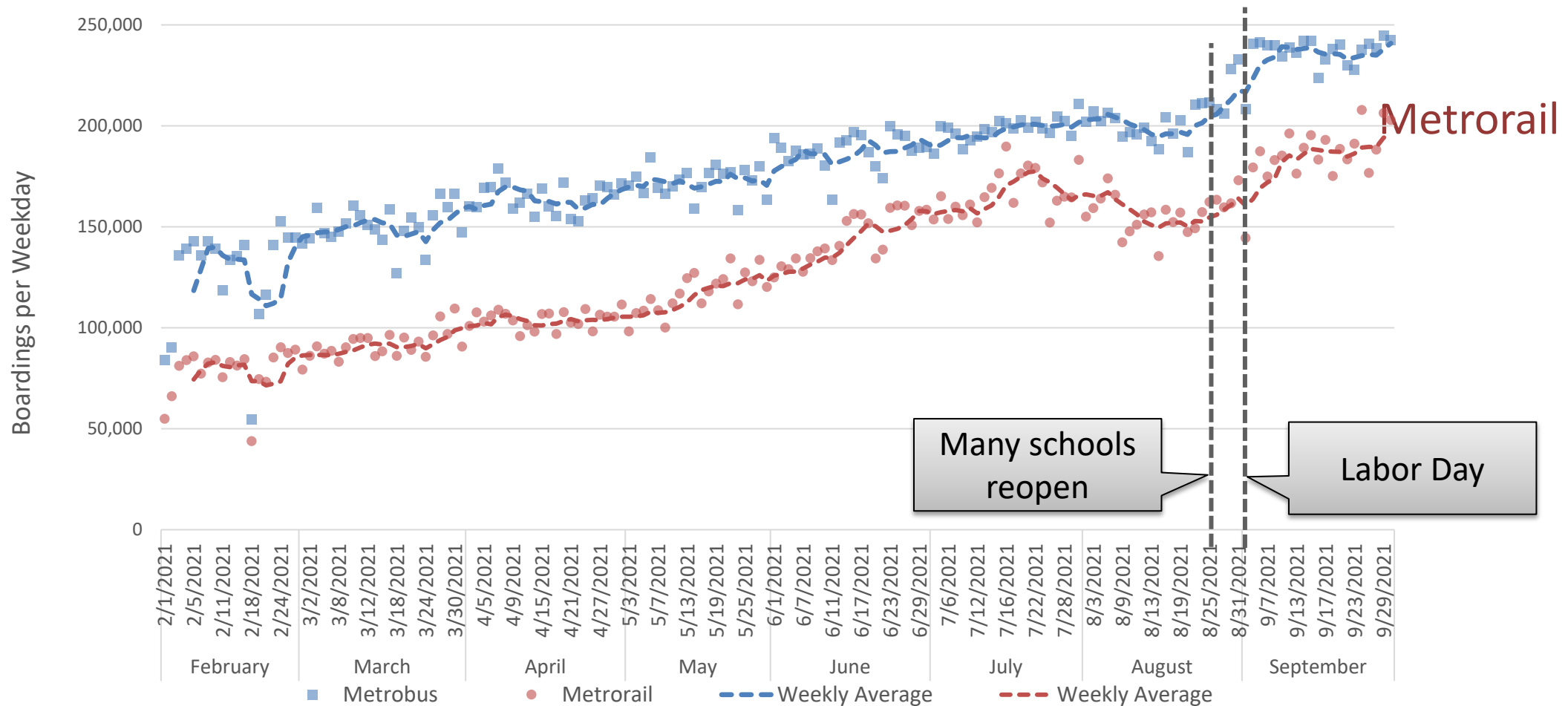


- Pre-pandemic, Metrorail ridership was growing ahead of projections with a 7 to 8% increase in the first eight months of FY20
- Weekday ridership was returning after falling during SafeTrack, a 2016 & 2017 accelerated track work program with rolling track outages

# Ridership Steadily Increasing Since February '21

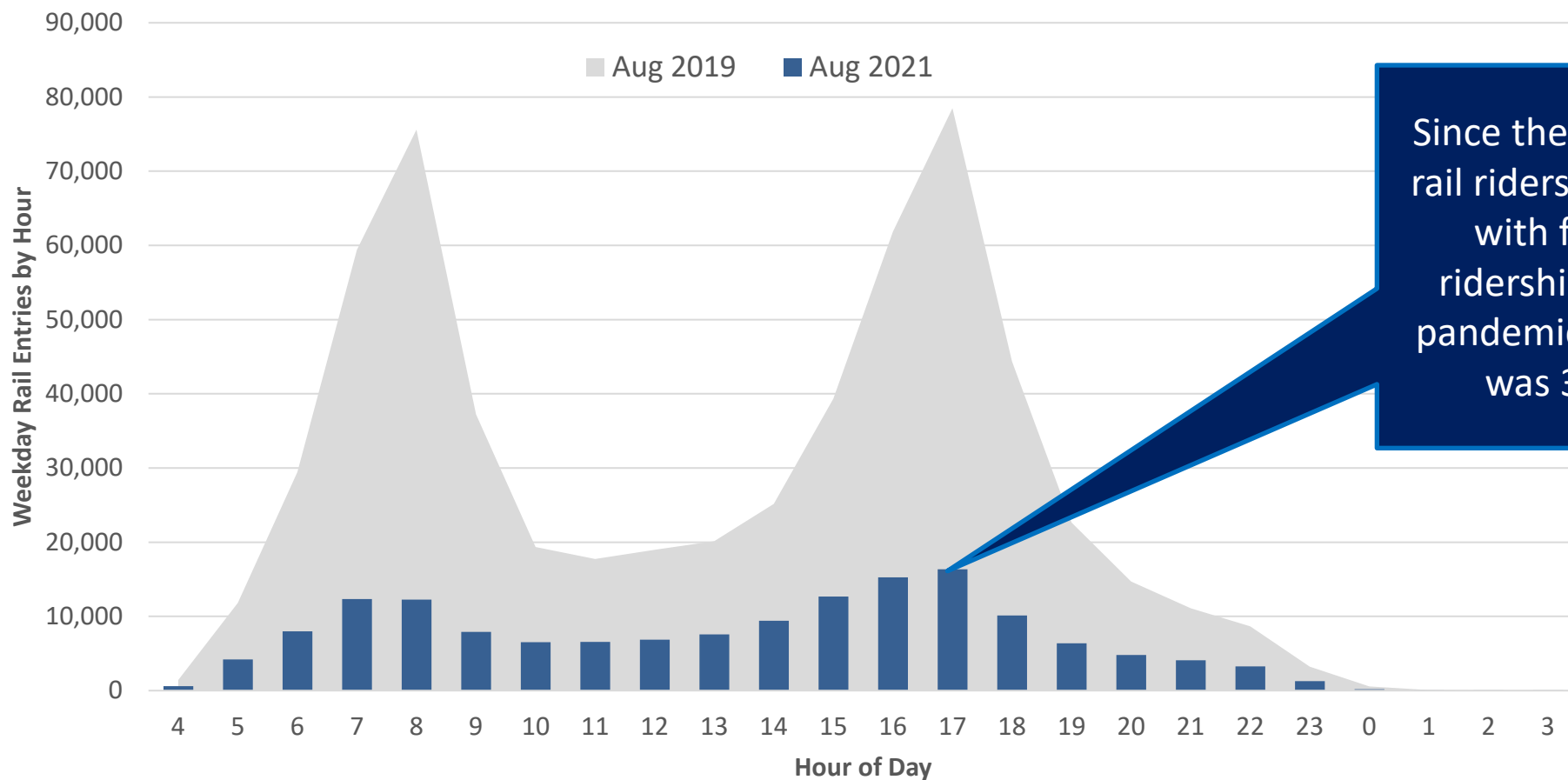
Metrobus

Metrorail



## Weekday Metrorail Demand has a Flatter Shape

Weekday Metrorail ridership: 2019 versus 2021



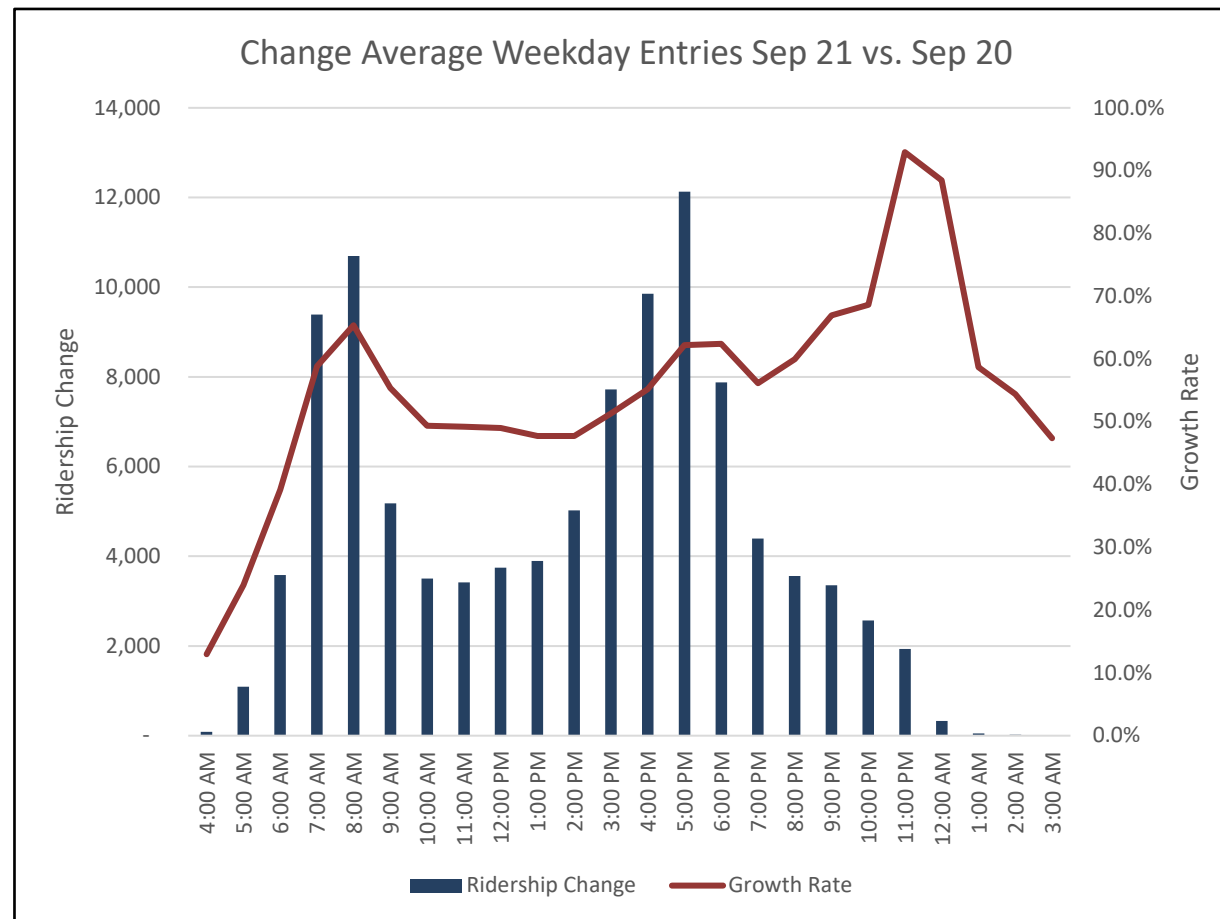
Since the pandemic, peak rail ridership is 2x midday, with flatter overall ridership. Prior to the pandemic, peak ridership was 3-4x midday.

## Change in Ridership by Hour: September '20 to '21

- Largest ridership increases:

- 7am
- 8am
- 9am
- 5pm
- 6pm
- 7pm
- 8pm

Hour	Ridership Change	Growth Rate
4:00 AM	82	↓ 13.0%
5:00 AM	1,093	↓ 24.0%
6:00 AM	3,584	↓ 39.2%
7:00 AM	9,386	→ 58.8%
8:00 AM	10,695	→ 65.4%
9:00 AM	5,183	→ 55.4%
10:00 AM	3,504	→ 49.4%
11:00 AM	3,420	→ 49.2%
12:00 PM	3,744	→ 49.0%
1:00 PM	3,892	→ 47.7%
2:00 PM	5,022	→ 47.7%
3:00 PM	7,720	→ 51.3%
4:00 PM	9,851	→ 55.2%
5:00 PM	12,128	→ 62.2%
6:00 PM	7,878	→ 62.4%
7:00 PM	4,392	→ 56.1%
8:00 PM	3,563	→ 60.0%
9:00 PM	3,354	↑ 67.0%
10:00 PM	2,571	↑ 68.6%
11:00 PM	1,932	↑ 92.9%
12:00 AM	326	↑ 88.4%
1:00 AM	46	→ 58.7%
2:00 AM	22	→ 54.4%
3:00 AM	12	→ 47.3%



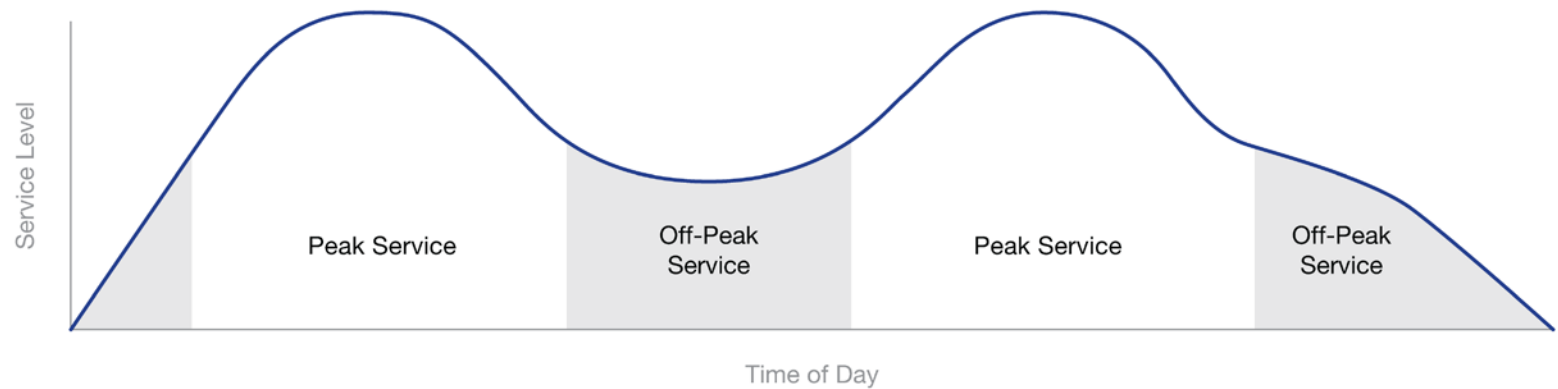




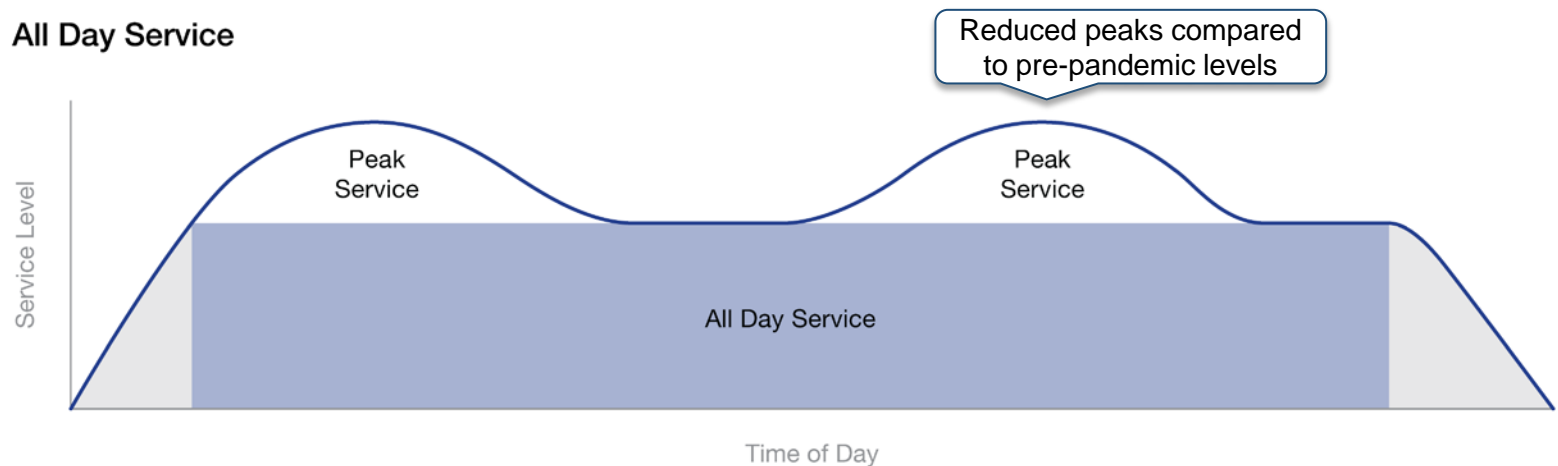
## WMATA implemented all-day service improvements on bus and rail to reflect changing ridership trends

- Consistent high frequency service offered seven days a week
- Emphasis on setting a high standard for “base” all day service levels
- Compatible with running more service to meet higher peak demand

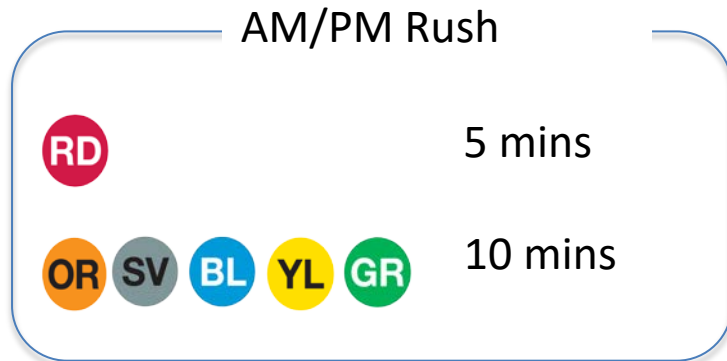
Peak-Focused Service



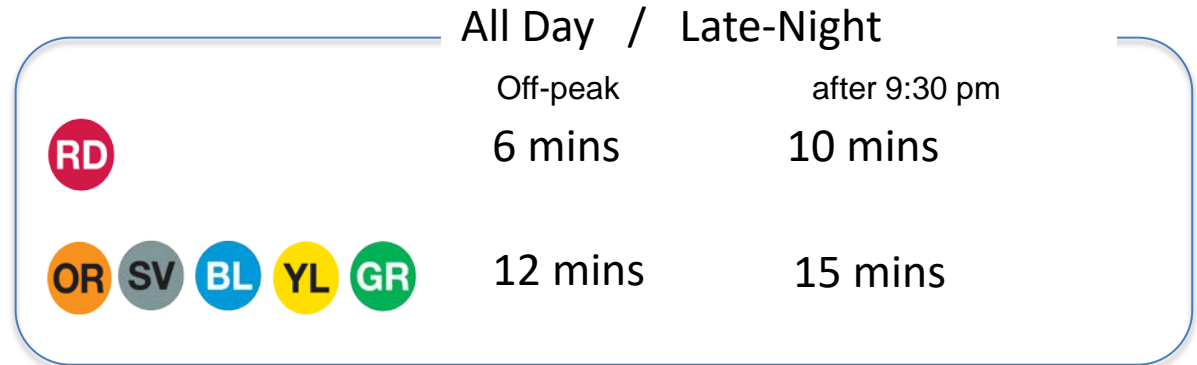
All Day Service



## FY22 Service Improvements| Rail



AM/PM Rush: 6:30a-9:30a and 3p-7p



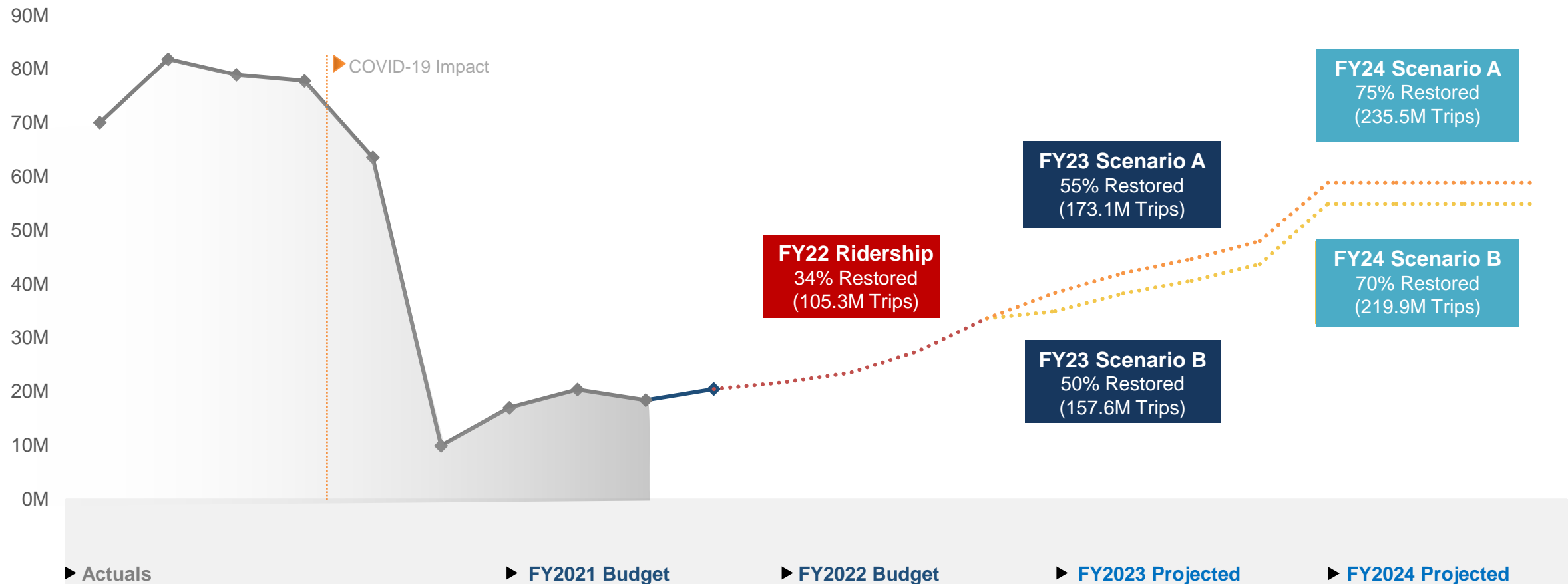
Operating Hours: Opening 5a M-F, 7a Sa-Su; Closing 12a Su-Th, 1a Fr-Sa

- Higher all day frequencies
  - Improved 6 to 12 minute weekday evening and weekend service
  - Improved later evening service with no less than 15 minute service (instead of 20 minute) on all lines at all times
- Better peak service
  - 5 to 10 minute weekday peak service to accommodate return to work and school
- 100% eight-car trains



- Expected to increase ridership ~7% systemwide above ridership recovery levels without improvements
- Especially benefits low-income and minority riders who are more likely to ride off-peak and weekends

## Preliminary High-Level Ridership Scenarios



Ridership percentages are based on preliminary high-level estimates

Note: Amounts are rounded for presentation purposes and may not sum



The end!

Thank you. Stay safe.



Please stay in touch!

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